Clean-copy Version of Claims

1. (Amended) A method for processing image information, the method comprising:

receiving an image in a first color space from an RGB (Red, Green, Blue) mosaic, said image including luminosity values captured at said RGB mosaic, said first color space including primary (Green) and secondary (Red, Blue) channels;

while said image is in said first color space, companding the image by mapping the luminosity values captured at said RGB mosaic into a space that is more linear to a human eye;

transferring the companded image to a server computer;

storing information describing a second color space, said second color space including primary and secondary channels, said primary channel of said second color space corresponding to the primary channel of said first color space; and

at the server computer, transforming the image into said second color space, including:

interpolating the primary channel of said second color space to full resolution by interpolating missing Green pixels from said RGB mosaic, and

computing the secondary channels of said second color space as differences from the primary channel of said second color, including performing substeps of:

(i) computing one of said secondary channels of said second color space by differencing Red pixels with co-sited Green pixels interpolated from said RGB mosaic, and

(ii) computing the other of said secondary channels of said second color space by differencing Blue pixels with co-sited Green pixels interpolated from said RGB mosaic.

2. The method of claim 1, wherein the primary channel for both said first and said second color spaces comprises predominantly Green (G).

3. The method of claim 2, wherein said first color space comprises an RGB color space and said second color space comprises a GUV color space.

4. The method of claim 1, wherein the secondary channels of the first color space comprise predominantly Red (R) and Blue (B).

5. The method of claim 1, wherein the image is initially captured at a sensor employing an RGB mosaic.

6. The method of claim 5, wherein said sensor employs a mosaic configured as a Bayer pattern.

7. The method of claim 1, further comprising:

after the image is transformed into said second color space, compressing the transformed image.

8. The method of claim 7, wherein said compressing step includes:

compressing the transformed image using transform-based compression.

9. The method of claim 8, wherein said transform-based compression comprises wavelet transform-based compression.

10. The method of claim 8, wherein said transform-based compression comprises DCT- (discrete cosine transformation) based compression.

11. The method of claim 7, wherein said second color space comprises GUV color space having individual G, U, and V planes and said compressing step comprises individually compressing each plane.

12. The method of claim 7, further comprising:

transmitting the compressed, transformed image to a target platform.

13. The method of claim 12, wherein said target platform comprises a computing device.

14. The method of claim 12, wherein said transmitting step includes:

transmitting the compressed, transformed image to a selected one of a desktop computer and a server computer.

15. The method of claim 12, wherein said transmitting step is performed using wireless transmission.

16. The method of claim 12, wherein said transmitting step is performed using wire-line transmission.

17. The method of claim 12, further comprising:

restoring said compressed, transformed image at the target platform to a non-compressed format.

18. The method of claim 17, further comprising:

transforming the non-compressed image into a standard-format color image.

19. The method of claim 18, wherein said standard-format color image comprises a JPEG-formatted color image.

20. The method of claim 17, further comprising:

transforming the non-compressed image into YUV color space.

21. The method of claim 17, further comprising:

transforming the non-compressed image into RGB color space.

22. The method of claim 1, wherein said interpolating step includes applying averaging technique.

23. The method of claim 7, further comprising:

further compressing the image by applying quantization and entropy coding.

24. The method of claim 23, wherein said entropy coding comprises Huffman coding.

25. The method of claim 12, wherein said transmitting step occurs before the primary channel of the second color space is interpreted to full resolution for the image.

26. (Amended) A method for transforming RGB image information into an efficient color space representation, the method comprising:

receiving an image in a first color space from an RGB (Red, Green, Blue) mosaic, said first color space comprising an RGB color space having a primary channel comprising Green (G) and secondary channels comprising Red (R) and Blue (B), said image including luminosity values captured at said RGB mosaic;

while said image is in said first color space, companding the image by mapping the luminosity values captured at said RGB mosaic into a space that is more linear to a human eye;

transferring the companded image to a server computer;

storing information describing a second color space having primary and secondary channels, said primary channel of said second color space comprising Green (G); and

at the server computer, transforming the image into said second color space, including:

interpolating the primary channel of said second color space to full resolution by interpolating missing Green pixels from said RGB mosaic, and

computing the secondary channels of said second color space as differences from the primary channel of said second color space, by differencing Red pixels with co-sited Green pixels interpolated from said RGB mosaic and differencing Blue pixels with co-sited Green pixels interpolated from said RGB mosaic.

27. The method of claim 26, wherein Green (G) incorporates colors that are substantially green.

28. The method of claim 27, wherein said second color space comprises a GUV color space.

29. The method of claim 26, wherein the image is initially captured at a sensor employing an RGB mosaic.

30. The method of claim 29, wherein said sensor employs a mosaic configured as a Bayer pattern.

31. The method of claim 26, further comprising:

after the image is transformed into said second color space, compressing the transformed image.

32. The method of claim 31, wherein said compressing step includes:

compressing the transformed image using transform-based compression.

33. The method of claim 32, wherein said transform-based compression comprises wavelet transform-based compression.

34. The method of claim 32, wherein said transform-based compression comprises DCT- (discrete cosine transformation) based compression.

35. The method of claim 31, wherein said second color space comprises GUV color space having individual G, U, and V planes and said compressing step comprises individually compressing each plane.

36. The method of claim 31, further comprising:

transmitting the compressed, transformed image to a target platform.

37. The method of claim 36, wherein said target platform comprises a computing device.

38. The method of claim 36, wherein said transmitting step includes:

transmitting the compressed, transformed image to a selected one of a desktop computer and a server computer.

39. The method of claim 36, wherein said transmitting step is performed using wireless transmission.

40. The method of claim 36, wherein said transmitting step is performed using wire-line transmission.

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